

**INTERCONNECTIONS WITH ELECTRICALLY CONDUCTIVE ADHESIVES:  
STRUCTURES, MATERIALS, METHOD AND THEIR APPLICATIONS**

**ABSTRACT OF DISCLOSURE**

5 A new interconnection scheme is disclosed for a tape  
automated bonding (TAB) package, a flip chip package and an  
active matrix liquid crystal display (AMLCD) panel, where an  
electrically conducting adhesive is used to form an  
electrical interconnection between an active electronic  
device and its components. The electrically conducting  
10 adhesive can be a mixture comprising a polymer resin, a  
no-clean solder flux, a plurality of electrically conducting  
particles with an electrically conducting fusible coating  
which provides a metallurgical bond between the conducting  
particles as well as to the substrates. The advantages of  
15 using the electrically conducting adhesives include  
reduction in bonding pressure and/or bonding temperature,  
control of interfacial reactions, promotion of stable  
metallurgical bonds, enhanced reliability of the joints, and  
others.